



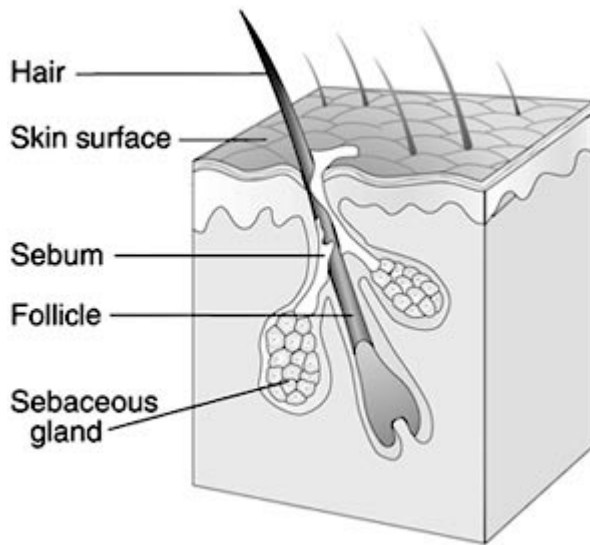
## Overview

### Points To Remember About Acne

- Doctors don't know what causes acne, but taking care of your skin can prevent outbreaks from becoming worse.
- Anyone can get acne, although it's most common in teens and young adults.
- Hormone changes during puberty, before a woman's monthly period, or after starting or stopping birth control can cause acne outbreaks.
- If you have severe acne, you may need to see a dermatologist, a type of doctor that specializes in treating skin problems.
- Avoid squeezing or picking at pimples to reduce the risk of scarring.

Acne is a disorder that affects the skin's oil glands and hair follicles. Plugged pores and outbreaks of lesions, commonly called pimples or zits, occur on the face, neck, back, chest, and shoulders.

Acne affects the pilosebaceous units (PSUs), found over most of the body. They are most numerous on the face, upper back, and chest. PSUs consist of a sebaceous gland connected to a canal, called a follicle, which contains a fine hair. In healthy PSUs, the sebaceous glands make an oily substance called sebum that empties onto the skin surface through the opening of the follicle, called a pore. Cells called keratinocytes line the follicle.



Normal Pilosebaceous Unit

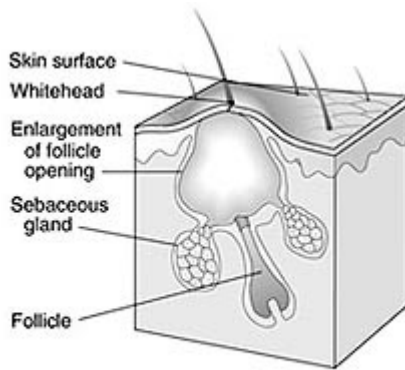
When someone has acne, the hair, sebum and keratinocytes may plug up the pore, which keeps the sebum from reaching the surface of the skin. The mixture of oil and cells allows bacteria that normally live on the skin to grow in the plugged follicles and cause inflammation—swelling, redness, heat, and pain. When the wall of the plugged follicle breaks down, it spills the bacteria, skin cells and sebum into nearby skin, causing lesions or pimples.

For most people, acne tends to go away by the time they reach their thirties, but some people in their forties and fifties continue to have this skin problem.

## Who Gets

People of all races and ages get acne, but it is most common in adolescents and young adults. An estimated 80 percent of all people between the ages of 11 and 30 have acne outbreaks at some point.

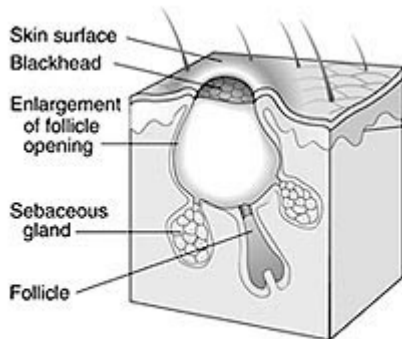
## Types



**Closed Comedo (Whitehead)**

Acne causes several types of lesions, or pimples.

- A comedo (KOM-e-do): enlarged and plugged hair follicle.
- A whitehead or closed comedo: a plugged hair follicle that stays beneath the skin and produces a white bump.
- A blackhead or open comedo: a plugged follicle that reaches the surface of the skin and opens up. It looks black on the skin surface because the air discolors the sebum, not because it is dirty.
- Papules: inflamed lesions that usually appear as small, pink bumps on the skin and can be tender to the touch.
- Pustules or pimples: papules topped by white or yellow pus-filled lesions that may be red at the base.
- Nodules: large, painful solid lesions that are lodged deep within the skin.
- Cysts: deep, painful, pus-filled lesions that can cause scarring.



**Open Comedo (Blackhead)**

## Causes

Doctors don't know exactly what causes acne, but it probably results from several related factors. One is an increase in hormones called androgens, or male sex hormones. These increase in both boys and girls during puberty and cause the sebaceous glands to enlarge and make more sebum. Hormonal changes related to pregnancy or starting or stopping birth control

pills can also cause acne.

Researchers believe that you may be more likely to get acne if your parents had acne. Certain drugs, including androgens and lithium, can also cause acne. Greasy makeup may alter the cells of the follicles and make them stick together, causing pores to get clogged.

There are many myths about what causes acne. The following do not cause acne:

- Foods you eat, such as chocolate and greasy foods.
- Dirty skin.
- Stress, but if you already have acne, stress can make it worse.

## Treatment

Treatment helps heal existing lesions, stop new lesions from forming, and prevent scarring. Medicines can reduce several problems that play a part in causing acne, including abnormal clumping of cells in the follicles, increased oil production, bacteria, and inflammation. A doctor may recommend over-the-counter or prescription medicines to take in a pill or apply to the skin.

Some over-the-counter topical medicines, which are applied to the skin, include:

- Benzoyl peroxide, which kills bacteria and may also reduce oil production.
- Resorcinol, which can help break down blackheads and whiteheads.
- Salicylic acid, which helps break down blackheads and whiteheads and also helps reduce the shedding of cells lining the hair follicles.
- Sulfur, which helps break down blackheads and whiteheads.

Topical medicines come in many forms, including gels, lotions, creams, soaps, and pads. In some people, topical medicines may cause side effects such as skin irritation, burning, or redness, which often get better or go away with continued use. If you have severe or prolonged side effects, you should report them to your doctor.

Several types of prescription medicines include:

- Antibiotics, which help slow or stop the growth of bacteria and reduce inflammation.
- Vitamin A derivatives, or retinoids, which unplug existing comedones, allowing other medicines, such as antibiotics, to enter the follicles. Some may also help decrease the formation of comedones.
- Other medicines may destroy bacteria, reduce oil production or reduce inflammation.

## Who Treats

Diagnosing and treating acne may involve you and several types of health professionals, including:

- General or family physicians.
- Dermatologists, who specialize in treating skin problems.
- Internists, who specialize in the diagnosis and medical treatment of adults.
- Pediatricians, who diagnose and treat children.

## Living With

If you have acne, you may want to follow some of these recommendations for taking care of your skin.

- Clean your skin gently. Use a mild cleanser in the morning, in the evening and after heavy exercise. Do not use strong soaps or rough scrub pads. Only use astringents if the skin is very oily, and then only on oily spots.
- Shampoo your hair regularly. If you have oily hair, you may want to wash it every day.
- Avoid rubbing and touching skin lesions. Squeezing or picking blemishes can cause scars or dark blotches to develop.
- Shave carefully. Make sure the blade is sharp, and soften the hair with soap and water before applying shaving cream. Shave gently and only when necessary to reduce the risk of nicking blemishes.
- Avoid sunburn and suntan. Many of the medicines used to treat acne can make you more prone to sunburn.
- Choose cosmetics carefully. All cosmetics and hair-care products should be oil free. Choose products labeled noncomedogenic, which means they don't clog pores. In some people, however, even these products may make acne worse.

Some things can make acne worse. These include:

- Changing hormone levels in teen girls and adult women two to seven days before their menstrual periods start.
- Oil from skin products (moisturizers or cosmetics) or grease in the work environment (such as a kitchen with fry vats).
- Pressure from sports helmets, tight clothes or backpacks.
- Environmental irritants, such as pollution and high humidity.
- Squeezing or picking at blemishes.
- Scrubbing your skin too hard.
- Stress.

## Research Progress

Medical researchers are looking for new drugs to treat acne. Doctors are finding that, over time,

the bacteria associated with acne are becoming resistant to certain antibiotics, though it is not clear how significant a problem this resistance represents. Some researchers are trying to identify probiotics to treat acne-affected skin.

Scientists are also trying to better understand the mechanisms involved in acne so they can develop new treatments that work on those mechanisms. For example, one group of NIAMS-supported researchers is studying the mechanisms that regulate the development of the sebaceous glands. Another group is trying to understand how acne-causing bacteria activate the immune system in order to identify possible immunologic interventions.

Researchers are also studying the skin microbial community to understand its association with acne.

## Related Resources

### **U.S. Food and Drug Administration**

Toll free: 888-INFO-FDA (888-463-6332)

Website: <https://www.fda.gov>

Drugs@FDA at <https://www.accessdata.fda.gov/scripts/cder/daf>. Drugs@FDA is a searchable catalog of FDA-approved drug products.

### **Centers for Disease Control and Prevention, National Center for Health Statistics**

Website: <https://www.cdc.gov/nchs>

### **American Academy of Dermatology**

Website: <https://www.aad.org>

If you need more information about available resources in your language or other languages, please visit our webpages below or contact the NIAMS Information Clearinghouse at [NIAMSInfo@mail.nih.gov](mailto:NIAMSInfo@mail.nih.gov).

- [Asian Language Health Information](#)
- [Spanish Language Health Information](#)

### **Join a Clinical Trial**

[Find a Clinical Trial](#)

### **Related Information**

[Questions and Answers about Acne](#)

## **View/Download/Order Publications**

[Acne, Easy-to-Read Fast Facts](#)

[Healthy Skin Matters: Kids' Fact Sheet](#)